Pacific Gas and Electric Company®

SDGE
A Sempra Energy utility®

California Energy Commission
Docket Office, MS-4
Re: Docket #11-IEP-1F
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.state.ca.us

Re: California Energy Commission Docket #11-IEP-1F: Comments Related to Staff Workshop on Achieving Energy Savings in California Buildings

To Whom It May Concern:

On July 20, 2011, the California Energy Commission (CEC) held a Staff Workshop on Achieving Energy Savings in California Buildings (the Workshop) in connection with the 2011 Integrated Energy Policy Report (2011 IEPR) and the release of the Draft Staff Report "Achieving Energy Savings in California Buildings" (the Draft Staff Report). Pacific Gas & Electric Company (PG&E) and San Diego Gas and Electric Company (SDG&E, and together with PG&E, the IOUs) appreciate the opportunity to comment on the Workshop and the Draft Staff Report. Accordingly, the IOUs provide the following comments and recommendation for the CEC's consideration.

General Comments

The IOUs commend the California Energy Commission (CEC) for developing a compelling plan for saving energy in California buildings. In particular, the work on training, codes and standards, rating systems for residential and commercial buildings, electronics and plug loads, AB758, financing, compliance and enforcement, and pilots has been very good. However, the IOUs believe there are some areas that could benefit from additional thought. The following comments are focused on the actionable steps towards achieving deep energy savings in California buildings within the Warren-Alquist mandate of exhausting all feasible and cost-effective methods of reducing energy consumption.

Pacific Gas and Electric Company®

SDGE
A Sempra Energy utility®

Setting a Trajectory

Current recommendations in the Draft Staff Report are for the CEC to pursue 20-30% efficiency improvements in each (3 year) T-24 code cycle. There are three code cycles (including the proceeding under way) between the present and the 2020 residential zero net energy milestone in the CPUC Long Term Energy Efficiency Strategic Plan (the Strategic Plan). To better align the CEC energy recommendations with the CPUC goals, the CEC should consider a straight line trajectory towards achieving these goals that considers a mix of building energy efficiency and renewable generation.

This trajectory would imply that each 3 year code cycle we should achieve a net 1/3 reduction in purchased energy; on average across the state this is a per house reduction of 2,200 kWh/yr and 120 therm/yr for homes built after 2014.[1] If this straight line approach were taken, the 2013 standards would reduce energy consumption by 33%, the following code cycle in 2016 would reduce the remaining purchased energy by 50% and the third code cycle in 2019 would reduce all purchased energy by 100% (after onsite renewables) so that the home would be zero net energy.

Title 24 Jurisdiction

If the CEC code cycle is aligned with the Strategic Plan and by code cycle goals, it would result in top down targets that might require a rethinking of the recommendations in the Draft Staff Report. A revised plan that hits the intermediate targets, and that also includes a deliberate mix of increased energy efficiency and renewables requirements, would likely result in a significantly higher savings target for Title 24 in the current code cycle. Such a plan would also likely require a vastly expanded agenda and resources dedicated to appliance standards over the next three years.

In spite of common perceptions of Title 24 as a vehicle to address all areas of building energy efficiency, the following bullets illustrate some areas of limited influence of Title 24 on building energy consumption that should be considered:

- 54% of electricity consumption is for plug loads which are not regulated by Title 24. Of these plug loads approximately half are already federally preempted.

[1] According to the 2009 Residential Appliance Saturation Survey (RASS), electricity consumption for an average new home is 6,645 kWh/yr and 370.5 therm/yr.

- Of the remaining components of residential electricity consumption regulated by Title 24, another 10% of total electricity use is for loads that are served by air conditioning and other equipment that cannot be regulated due to Federal preemption. Also 83% of gas consumption is for space heating and water heating, the efficiencies of this equipment is also subject to Federal appliance standards, which also prevents California codes from setting higher gas-fired equipment efficiencies.

The implication of these realities is that Title 24 is not a "silver bullet" for all that ails the energy efficiency of homes or other buildings. A comprehensive approach is needed on the regulatory side of building energy efficiency. A plan with projected outcomes of each component of the plan is needed so that resources can be best allocated and the efforts and activities are structured to produce the desired outcomes.

Legislative Relief and Participation on the Federal Level

An increasing fraction of plug loads are also being regulated by the federal appliance efficiency regulations. Current federal preemption rules disallow California from setting appliance efficiency standards higher than the federal appliance standards. Federal preemption also requires that California building efficiency codes be based on minimum federal efficiency levels. This is an impediment to realizing California energy efficiency and GHG goals in a cost-effective manner.

We recommend that California lead an effort to structure federal regulations in a way that sets those standards as the floor but not the ceiling for California building and appliance efficiency standards. This effort should include the CEC, CPUC, and the governor's office. This delegation should actively participate in all federal appliance efficiency regulations. For all new federal appliance legislation, we recommend that the California delegation regularly take the position that new federal efficiency regulations be structured so that they do not prevent California from setting even higher standards.

Acceleration of Title 20 Standards for the Commercial Sector

Though the Draft Staff Report clearly recognizes the importance of energy efficiency improvements in the commercial sector, we believe an acceleration of the Title 20 appliance efficiency regulations for commercial buildings is desirable for the following reasons:

- California has higher energy costs, more urgent water conservation needs, and a more advanced energy policy than the country as a whole. Adopting an efficiency standard in Title 20 will likely result in a more stringent standard with an earlier effective date than if DOE adopts a standard.
- Appliance efficiency standards adopted sooner brings the financial and environmental benefits to its citizens by eliminating the worst performing products and by testing and listing all products so consumers can compare the energy performance of competing products.
- Products sold today may be around for the next 15 years with higher energy consumption and related emissions.

Plug Loads and Other Areas of Potential

As mentioned above, the IOUs agree with the emphasis on plug loads/electronics in the Draft Staff Report. However, we believe it is worth highlighting additional opportunities in this area. We estimate that an additional 9% of total electricity reduction in homes could be trimmed by cost-effective efficiency regulations for the following products that are increasingly used in homes:

- Personal computers (including monitors).
- Expanding television efficiency regulations to TV's larger than 57 inches (the market share of this unregulated category is increasing significantly and represents the biggest energy-consuming TVs).
- Miscellaneous personal electronics (set-top boxes, game consoles, etc.).
- Small reflector lamps.

Code Enforcement through Electronic Record-Keeping at the State Level

We commend the commission's work on code compliance. However, we believe there are additional measures that can be taken that will benefit the state in this area. Electronic record-keeping, error checking, and scheduling can simplify the tasks for building departments and reduce their costs. Having different code documentation tracking systems for each of the approximately 500 California jurisdictions makes little sense. We recommend that the CEC maintain an electronic repository with increasingly sophisticated data analysis tools and with increasingly easy to use user interfaces to simplify code compliance and code enforcement. The investment in a computerized data storage repository and a data checking system at the state level can be structured to

reduce costs at the local level. We recommend that a plan be developed to provide an increasingly capable central data repository that is phased in so that it is serving all of the energy code compliance processing and screening validation needs by the beginning of the 2013 code cycle.

Building Ratings

Regardless of the approach taken, we expect that the California building standards will become more stringent over time. This has resulted in a struggle each code cycle between California builders and efforts to increase building code stringency. Building efficiency standards result in new California homes being extremely energy efficient. However they compete in a market where half of the homes were built prior to any efficiency standard. Many of the efficiency features in a new home are invisible to the home buyer and many of the energy defects in old homes are similarly invisible until after the home buyer has purchased and is living in the home. We support the effort to further explore home ratings and their impact on adoption of EE measures in the critically important existing building stock. It is important to help purchasers make rational cost decisions based on the total cost of ownership (including utility costs).

Improving EE Programs

Since a year's new construction is between 1-2% of existing building stock, any significant inroads to building energy consumption requires an aggressive retrofit effort. Ratings will help motivate this effort. However, we recommend that the CEC and CPUC coordinate to remove all barriers to energy retrofits. An example of one barrier is the current CPUC rules that calculate retrofit savings on code baselines, not the below-code levels of many buildings. This limits the breadth and scope of utility retrofit programs and should be revisited.[2]

Research and Development (R&D), Commercialization, and IOU Programs

Knowledge and experience gleaned from R&D, commercialization, and IOU program efforts underlies much of the progress in energy efficiency the state has made since the 1970s. Likewise, continued efforts in all of these areas will be just as essential moving

---

[2] McHugh, J., Mahone, D., Bruceri, M., and Eilert, P. *A New Class of Retrofits: "Repair Indefinitely"* Proceedings of the 2010 ACEEE Summer Study of Energy Efficiency in Buildings.

forward. R&D in efficient technologies and building practices is imperative for driving down costs. Commercialization, "the discipline of the marketplace," helps validate the feasibility of efficiency options that look good on paper but which don't always pencil out in practice. Similarly IOU programs that develop a market for advanced technologies and then calculate their actual performance and applicability is a foundation for many of the measures that ultimately are adopted into code or retrofitted into existing buildings. We urge the commission to continue to support efforts in these areas and recognize their important role they will play in meeting the aggressive California goals in the final version of the Staff Report.

Financing

The discussion of financing in the Draft Staff Report highlights many of the programs in the state that provide financial assistance to energy efficiency projects. However, the utility on-bill financing programs also help to fill this critical gap and, as programs ramp up, we expect these programs to play an increasingly important role. We request that the commission include a discussion of these programs as a part of the financing discussion in the final version of the Staff Report.

Pacific Gas and Electric Company®

SDGE

A Sempra Energy utility®

If you have any questions or need additional information about these written comments, please contact Mark Krausse at (916) 386-5709 or Tamara Rasberry at (916) 492-4252.

Very truly yours,

/s/ Mark Krausse

/s/ Tamara Rasberry


| | |
|---|---|
| Mark Krausse,<br>Director, State Agency Relations<br>Pacific Gas & Electric Company<br>1415 L Street, Suite 280<br>Sacramento, CA 95814<br>(916) 386-5709 | Tamara Rasberry,<br>Governmental Affairs Manager<br>San Diego Gas & Electric Company<br>925 L St Ste 650<br>Sacramento, CA 95814<br>(916) 492-4252 |